

# Preservation of Ferry System Vessels

## Our promise to the public

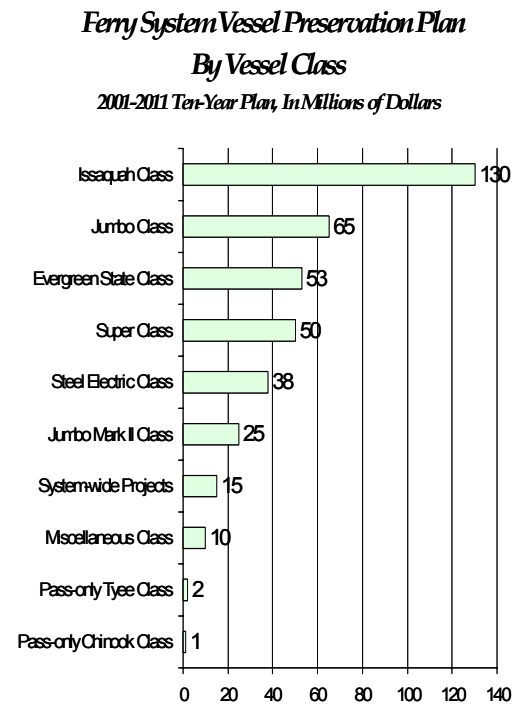
The Washington State Department of Transportation (WSDOT) is committed to protecting the public's investment in the Ferry System's 29 vessels by keeping them in safe, sound, comfortable and efficient operating condition.

## What is WSDOT doing to protect its ferries?

WSDOT is using \$99 million of its 2001-2003 Biennium spending authority to preserve the Ferry System's vessels. The major investments during the biennium are for preserving ferries in the Issaquah, Jumbo and Super vessel classes. Overall, this two-year investment plan affects 25 vessels by replacing or refurbishing 164 systems

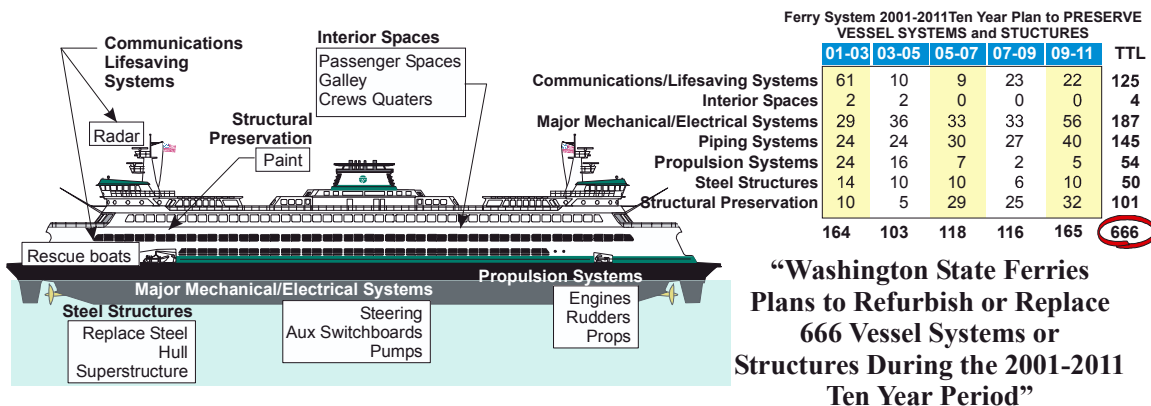
and structures, including 61 communications, navigation and life saving systems; 29 major mechanical and electrical systems; 24 propulsion systems; 24 piping systems; 14 steel structures and 12 other systems and structures.

Over the 2001-2011 ten-year period, WSDOT plans to spend \$389 million to preserve vessels. This effort will replace or refurbish a total of 666 systems and structures. The first two tables below display spending by vessel class and individual vessel. The third table displays the types and numbers of systems and structures that will be preserved. An illustration is provided that shows typical vessel systems and structures.



**Ferry System Vessel**  
**2001-2011 Ten-Year Preservation Plan**  
*In Millions of Dollars*

Vessel Class	2001-2003 Biennium	2003-2005 Biennium	2005-2007 Biennium	2007-2009 Biennium	2009-2011 Biennium	2001-2011 10-Years
<b>Issaquah Class</b>	<b>39.2</b>	<b>23.1</b>	<b>35.4</b>	<b>17.4</b>	<b>14.8</b>	<b>129.9</b>
Chelan	14.8	3.1	10.2	0.0	0.8	28.9
Cathlamet	3.8	7.7	4.2	0.1	7.1	22.9
Sealth	6.7	6.2	1.7	7.7	0.0	22.3
Kittitas	7.0	4.6	3.1	4.4	0.0	19.1
Issaquah	3.6	1.3	10.2	0.0	3.8	18.9
Kitsap	3.3	0.2	6.0	5.2	3.1	17.8
<b>Jumbo Class</b>	<b>17.7</b>	<b>38.2</b>	<b>0.8</b>	<b>6.5</b>	<b>1.6</b>	<b>64.8</b>
Walla Walla	8.5	23.5	0.8	6.5	0.0	39.3
Spokane	9.2	14.7	0.0	0.0	1.6	25.5
<b>Evergreen State Class</b>	<b>12.2</b>	<b>10.3</b>	<b>20.7</b>	<b>8.6</b>	<b>1.6</b>	<b>53.3</b>
Evergreen State	0.0	7.4	18.7	0.0	1.0	27.1
Klahowya	7.0	1.5	0.7	5.6	0.6	15.4
Tillikum	5.2	1.4	1.3	2.9	0.0	10.8
<b>Super Class</b>	<b>17.2</b>	<b>1.7</b>	<b>12.7</b>	<b>10.3</b>	<b>7.9</b>	<b>49.8</b>
Elwha	11.7	0.9	3.3	4.0	6.3	26.2
Kaleetan	1.1	0.8	0.9	6.3	1.3	10.4
Yakima	0.2	0.0	8.5	0.0	0.3	9.0
Hyak	4.2	0.0	0.0	0.0	0.0	4.2
<b>Steel Electric Class</b>	<b>1.4</b>	<b>7.9</b>	<b>5.0</b>	<b>0.0</b>	<b>24.0</b>	<b>38.3</b>
Klickitat	0.4	1.8	1.9	0.0	9.8	13.7
Quinalt	0.4	2.8	0.0	0.0	6.9	10.1
Nisqually	0.3	0.9	1.1	0.0	5.3	7.6
Ilwaco	0.3	2.6	2.0	0.0	2.0	6.9
<b>Jumbo Mark II Class</b>	<b>1.5</b>	<b>0.0</b>	<b>0.0</b>	<b>18.4</b>	<b>5.5</b>	<b>25.4</b>
Puyallup	0.5	0.0	0.0	6.2	2.0	8.7
Tacoma	0.5	0.0	0.0	6.9	1.3	8.7
Wenatchee	0.5	0.0	0.0	5.3	2.2	8.0
<b>System-wide Projects</b>	<b>8.4</b>	<b>2.3</b>	<b>1.3</b>	<b>1.3</b>	<b>1.4</b>	<b>14.7</b>
<b>Miscellaneous Class</b>	<b>0.1</b>	<b>0.2</b>	<b>1.8</b>	<b>0.0</b>	<b>8.4</b>	<b>10.5</b>
Rhodoendron	0.1	0.2	1.8	0.0	8.4	10.5
Hlyu	0.0	0.0	0.0	0.0	0.0	0.0
<b>Passenger-Only Tyee Class</b>	<b>1.0</b>	<b>0.2</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>1.5</b>
Replacement for Kalama & Skagit	0.0	0.0	0.0	0.1	0.1	0.2
Tyee	0.8	0.2	0.1	0.0	0.0	1.1
Kalama	0.2	0.0	0.0	0.0	0.0	0.2
Skagit	0.0	0.0	0.0	0.0	0.0	0.0
<b>Passenger-Only Chinook Class</b>	<b>0.1</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.8</b>	<b>0.9</b>
Snohomish	0.0	0.0	0.0	0.0	0.8	0.8
Chinook	0.1	0.0	0.0	0.0	0.0	0.1
<b>Total</b>	<b>98.8</b>	<b>83.9</b>	<b>77.8</b>	<b>62.5</b>	<b>66.1</b>	<b>389.1</b>



## Why is WSDOT investing in the preservation of ferries?

Protecting a ferry is like maintaining an automobile. A car consists of many parts. Each part has a life expectancy. Each part must be replaced periodically to ensure the car operates safely, soundly, comfortably and efficiently. At any point in time a percentage of these parts are within their life cycle. For example, three of four tires on the car have incurred mileage less than the 60,000-mile tire warranty. The condition rating for the tires is 75%. The fourth tire has more miles on it than the warranty mileage. Inspection indicates that it is still safe to use, but it will need to be replaced in the near future.

The Ferry System’s fleet consists of 1,727 systems and structures. Some of these are designated as “vital” to the protection of people and the environment. Generally, they are the systems and structures needed to start, stop and keep a vessel in motion. All others are

designated “other” systems and structures. Over time systems and structures reach the end of their life cycles. In the absence of investments to protect these assets, the overall condition rating for the fleet declines.

## The end result

This project makes investments that help to ensure that WSF’s vessels work reliably and responsibly for our customers. In the 2001-2003 Biennium WSDOT will spend \$99 million to preserve 164 systems and structures. This effort will raise the condition rating for “vital” assets from 77% to 84% and for “other” assets from 55% to 56%. Over the ten-year planning period, WSDOT will spend \$389 million to preserve 666 systems and structures. This effort will raise the condition rating for “vital” assets from 77% to 93%. The condition rating for “other” assets will decline from 55% to 52%. Since WSDOT is emphasizing preservation of “vital” assets, WSF vessels will continue to be safe and sound.

## Vessel Preservation Investments and Results

### 2001-2011 Ten-Year Planning Period

	July 01	Jun 03	Jun 05	Jun 07	Jun 09	Jun 11	Total
Preservation Funding		\$ in Mil 99	\$ in Mil 84	\$ in Mil 78	\$ in Mil 62	\$ in Mil 66	\$ in Mil 389
Systems and Structures Preserved		# of Items	# of Items	# of Items	# of Items	# of Items	# of Items
Vital		128	87	51	51	58	375
Other		36	16	67	65	107	291
System/Structure Condition Rating	Percent	Percent	Percent	Percent	Percent	Percent	
Vital	77%	84%	92%	96%	92%	93%	
Other	55%	56%	51%	53%	50%	52%	

100-90%

89-70%

69-50%

49-0%

## What are the project time lines?

This is a ten-year preservation program that begins July 2001 and ends June 2011.

## What is being done to protect the environment?

Our vessel preservation program provides the following environmental protection:

- **Replacing or refurbishing navigation systems** allow our captains to use state-of-the-art equipment and up-to-date information to safely navigate our vessels to avoid potentially hazardous situations (such as shoals or other vessels) in all weather conditions. Installation of these new systems will help to minimize any risk of vessel groundings or collisions and the potential for an oil spill that may result from those types of incidents.
- **Replacing or refurbishing propulsion systems** allows our captains and crew to expertly control vessel speed and direction. Upgrades to these systems also work to minimize any risk of vessel groundings or collision and the potential for resultant spills.
- **Replacing or refurbishing mechanical and electrical systems** allows us to improve the energy efficiency of our vessels. Increased energy efficiency promotes environmental protection in many ways, from reducing the natural resources that are needed to power the vessels, to minimizing the wastes and/or emissions that are generated. In this biennium, we will be installing new engines in our Jumbo Mark I class vessels. These new engines contain electronic fuel injection systems that will reduce air emissions by up to 50%.
- **Replacing or refurbishing piping systems** ensures that the fluids that are necessary for ships operations (such as fuel, lubricants, fresh water, bilge water, etc) are safely contained and managed inside the vessel. Fluids handled in this way, pose little risk of release into the sensitive environment of Puget Sound.

## Increasing safety is one of our priorities

Preservation investments reduce the risk of injury to persons caused by failure of vessel systems and structures. Further, the Ferry System is investing heavily in safety, including setting up a safety management system and

Expenditure Plan Per Biennium							
	01-03	03-05	05-07	07-09	09-11	Future	Total
*Funded with State Revenues	\$67,409	\$64,616	\$57,840	\$42,600	\$46,013	\$0	\$278,478
Funded by Federal Grants	\$31,315	\$19,350	\$20,000	\$20,000	\$20,000	\$0	\$110,665
Funded Subtotal	\$98,724	\$83,966	\$77,840	\$62,600	\$66,013	\$0	\$389,143
Additional Revenue Required for Completion	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Project Total Cost	\$98,724	\$83,966	\$77,840	\$62,600	\$66,013	\$0	\$389,143

Financial data is current as of 9/1/01. Dollars are in thousands.

implementing US Coast Guard regulations pertaining to vessel marine evacuation systems and emergency response capabilities.

## Government-to-government tribal consultative process

This process is not applicable because the project does not impact tribal lands.

## Financial information

This ten-year plan for preserving Ferry System vessels is limited to work that can be fully funded from currently available revenues. The sources of funds are state revenues and federal grants. Note, WSDOT would do additional preservation work if revenue becomes available.

## How can I get more information?

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